That which his claimed is:

1. A curable carbazolyl-functional cyclosiloxane having the formula:

wherein R^1 is C_1 to C_{10} hydrocarbyl free of aliphatic unsaturation; R^2 is $-CH_2$ - CHR^3 - or $-CH_2$ - CHR^3 -Y-, wherein Y is a divalent organic group and R^3 is R^1 or -H; Z is a hydrolysable group; m is an integer from 2 to 10; n is 2, 3, 4, 5, or 6; and p is 0 or 1.

- 2. The curable carbazolyl-functional cyclosiloxane according to claim 1, wherein n has value of 3, 4, or 5.
 - 3. A silicone composition comprising:
 - (A) a curable carbazolyl-functional cyclosiloxane having the formula:

$$\begin{array}{c|c}
N & SiR^1 pZ_{3-p} \\
(CH_2)_m & R^2 \\
(SiO)_n & SiO \\
R^1 & R^1
\end{array}$$

wherein R^1 is C_1 to C_{10} hydrocarbyl free of aliphatic unsaturation, R^2 is $-CH_2$ - CHR^3 - or $-CH_2$ - CHR^3 -Y-, wherein Y is a divalent organic group and R^3 is R^1 or -H, Z is a hydrolysable group, m is an integer from 2 to 10, n is 2, 3, 4, 5, or 6, and p is 0 or 1;

(B) a condensation catalyst; and

- (C) an organic solvent.
- 4. The silicone composition according to claim 3, wherein p has a value of 1, and further comprising a cross-linking agent having the formula R⁴_tSiZ_{4-t}, wherein R⁴ is C₁ to C₈ hydrocarbyl or halogen-substituted hydrocarbyl, Z is a hydrolysable group, and t is 0 or 1.
 - 5. An organic light-emitting diode comprising:
 - a substrate having a first opposing surface and a second opposing surface;
 - a first electrode layer overlying the first opposing surface;
- a light-emitting element overlying the first electrode layer, the light emitting element comprising
 - a hole-transport layer and

an electron-transport layer, wherein the hole-transport layer and the electron-transport layer lie directly on one another, and one of the hole-transport layer and the electron-transport layer comprises a carbazolyl-functional polysiloxane selected from

a cured carbazolyl-functional polysiloxane prepared by curing a silicone composition comprising (A) at least one curable carbazolyl-functional cyclosiloxane having the formula:

wherein R¹ is C₁ to C₁₀ hydrocarbyl free of aliphatic unsaturation, R² is -CH₂-CHR³- or -CH₂-CHR³-Y-, wherein Y is a divalent organic group and R³ is R¹ or -H, Z is a hydrolysable group, m is an integer from 2 to 10, n is 2, 3, 4, 5, or 6, and p is 0 or 1, (B) a condensation catalyst, and (C) an organic solvent, and at least one carbazolyl-functional cyclosiloxane having the formula:

$$(CH_2)_m$$

$$Si-O$$

$$R^1$$

$$n+1$$

wherein R^1 is C_1 to C_{10} hydrocarbyl free of aliphatic unsaturation, m is an integer from 2 to 10, and n is 2, 3, 4, 5, or 6; and

- a second electrode layer overlying the light-emitting element.
- 6. The organic light-emitting diode according to claim 5, wherein the hole-transport layer is a carbazolyl-functional polysiloxane.
- 7. The organic light-emitting diode according to claim 5, wherein the electron-transport layer is a carbazolyl-functional polysiloxane.